Saskatchewan
Ministry of
Highways and
Infrastructure

2008 Ferry Traffic and Seasonal/Winter Roads

Annual Report

Traffic Services
Programs and Services Branch
Policy and Programs Division

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Executive Summary

This report summarizes traffic data collected at the 12 cable-stayed ferries and one free swimming ferry barge operated by the Ministry of Highways and Infrastructure during 2008. The report provides an analysis of passenger and vehicle volumes as well as traffic composition. Information about four seasonal roads operated by the Ministry is also included.

The main findings of the 2008 report are listed below.

- The ferry system operated above the ten year average for traffic levels.
- The 2008 ferry operating season length was slightly shorter than in the 2007.
- The total amount of down time reported by all ferries was higher than in 2007. Four of the ferries reported no down time at all.
- The Estuary and Lancer ferries were shut down for significant periods of time due mostly to high water and sandbars.
- Six other ferries at Riverhurst, Paynton, Cecil, Wingard, Lemsford, and Fenton were shut down for short periods usually due to high wind, high water, mechanical problems and sandbars.
- The 2008 ADT was 1.3% lower than the 2007 ADT.
- Cecil and Hague ferries carried over 10% more vehicles in 2008 than in 2007.
- Clarkboro, Estuary, and Lancer ferries carried over 10% less vehicles in 2008 than in 2007.
- The 2008 ADT at Cecil increased by over 15% compared with the 2007 ADT, while the ADT at the Weldon, Wingard, and Hague ferries increased by more than 5%.
- The Clarkboro ferry had the highest traffic volume.
- Only the Paynton, Riverhurst, Weldon, St. Laurent, and Wingard ferries had decreased truck percentages in 2008 compared with 2007.

The 2008 report recommends:

- When the operating agreement for the Wollaston Barge ferry is renegotiated, the operators be required to collect passenger volumes and to use the same vehicle classification system as the other ferries. The Traffic Engineers are prepared to assist the Wollaston Barge operators to change their vehicle classification system. The assistance could include a visit to the ferry if required.

1.0 Introduction

This annual report provides a summary and analysis of the traffic using the provincial ferry system in 2008. Traffic data is reported for the thirteen Ministry owned ferry sites in 2008. This report examines vehicle types and historic traffic for each ferry. Useful insights into the function of each ferry can be obtained by examining the distribution and composition of ferry traffic. Passenger data for twelve of the ferry sites and operational information about the four seasonal/winter roads are also included in this report.

2.0 Background

The Ministry operated twelve cable-stayed ferries and one free swimming ferry barge during 2008. Cable-stayed ferries operated on the North Saskatchewan and South Saskatchewan Rivers and on Lake Diefenbaker. The single free swimming ferry operates on Wollaston Lake to serve the community of Wollaston Lake. Other than replacing the Cumberland ferry with a bridge in 1996, the ferry system has not changed since responsibility for the system was moved to the Ministry in 1992. Ferry locations are shown in Table I below.

Table I. Ferry Locations

Ferry	Location	Ministry Region
Clarkboro	South Saskatchewan River	Central Region
Riverhurst	Lake Diefenbaker	Southern Region
Paynton	North Saskatchewan River	Central Region
Weldon	South Saskatchewan River	Northern Region
St. Laurent	South Saskatchewan River	Central Region
Cecil	North Saskatchewan River	Northern Region
Hague	South Saskatchewan River	Central Region
Wingard	North Saskatchewan River	Central Region
Lemsford	South Saskatchewan River	Southern Region
Estuary	South Saskatchewan River	Southern Region
Fenton	South Saskatchewan River	Northern Region
Lancer	South Saskatchewan River	Southern Region
Wollaston Barge	Wollaston Lake	Northern Region

Ferry traffic data was collected by the ferry operators and forwarded to the traffic engineers, who analyzed and compiled this annual report. The vehicle classification forms used by ferry operators are shown in Appendix A.

During the winter months, the Ministry operated four seasonal/winter roads, which have a total length of approximately 458 km. These roads provide access to isolated communities and seasonal industrial activities. The operational periods of the roads vary considerably from year to year because of weather conditions. Seasonal/winter road locations are shown in Table II below.

Table II. Seasonal/Winter Road Locations

Road	Location	Length (km)	Region
Cumberland House	Hwy 9 to Cumberland House	52	Northern Region
Riverhurst	Hwy 42 across Lake Diefenbaker	2	Southern Region
Wollaston Lake	Hwy 905 to Wollaston Lake	46	Northern Region
Athabasca	Points North Landing to Uranium City	358	Northern Region

The locations of the ferries and seasonal/winter roads, including ice crossings, are shown on the map on the following page.

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3.0 Ferry Operating Seasons

All ferries, except the Riverhurst ferry and the Wollaston Barge ferry, operated 17 hours per day between the hours of 7:00 am and midnight. The Wollaston Barge ferry operated when a trip was booked, and the Riverhurst ferry operated 24 hours per day. Ferries did not run at times because of mechanical failure, bad weather, or poor river conditions. Table III below summarizes the 2008 operational season including downtime at all ferries in the province. Details of the downtime periods and their causes are shown in Appendix B. The 2008 operating season was slightly shorter than in 2007 and the total amount of down time reported by all the ferries was significantly higher than in 2007. The main reason for the increase was much greater amounts of downtime for the Fenton, Estuary and Lancer ferries.

Table III. 2008 Ferry Operating Season Statistics

Ferry	Season				Out of Service	
	Opening	Closing	Length (days)	Operating Hours	Hours	Percent
Clarkboro	May 1	Dec 3	216	3672	0	0.0
Paynton	May 6	Nov 9	187	3058.5	120.5	3.8
Riverhurst	May 8	Dec 14	220	5156	130.5	2.5
Weldon	May 1	Nov 9	192	3248	0	0.0
St. Laurent	Apr 28	Nov 21	207	3519	0	0.0
Cecil	Apr 29	Nov 9	194	3254.5	34	1.0
Wingard	Apr 25	Nov 6	195	3281	34	1.0
Lemsford	Apr 15	Nov 20	219	3599	118	3.2
Hague	Apr 25	Nov 23	212	3604	0	0.0
Fenton	Apr 30	Nov 9	193	3125.3	145.67	4.5
Estuary	Apr 15	Oct 20	188	2774	422	13.2
Lancer	Apr 16	Nov 19	217	3327.8	355.17	9.6
Wollaston Lake	Jun 25	Oct 27	144			1.6

4.0 Volume, Passenger and Classification Summaries

Table IV below summarizes the 2008 monthly traffic at the ferry sites. Historic traffic volumes for these ferries are shown in Appendix C. The average number of vehicles using the ferry per day is represented by the Average Daily Traffic (ADT). Historic ADT is shown in Appendix D. ADT at the Riverhurst ferry and Wollaston Barge ferry can not be directly compared to other ferries. The Riverhurst ferry operated 24 hours a day whereas the other cable-stayed ferries operated 17 hours a day. The Riverhurst ferry is also the only ferry that is located on a provincial highway.

Table IV. Monthly Ferry Traffic Volumes for the 2008 Season

Ferry	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Total	ADT
Clarkboro	0	12,672	11,785	10,576	13,251	12,642	11,149	8,393	204	80,672	373
Paynton	0	3,198	3,689	5,784	5,574	4,463	3,724	838	0	27,270	152
Riverhurst	0	2,878	5,061	7,222	5,719	3,218	2,980	2,327	798	30,203	141
Weldon	0	4,592	4,631	4,627	4,859	4,137	4,062	930	0	27,838	146
St. Laurent	135	2,681	2,919	5,246	2,902	2,678	2,557	1,187	0	20,305	98
Cecil	43	2,102	1,880	2,002	2,253	2,276	1,959	472	0	12,987	68
Wingard	41	1,428	1,776	2,381	2,132	1,803	1,726	449	0	11,736	61
Lemsford	311	1,309	1,232	1,976	1,875	1,430	1,437	688	0	10,258	48
Hague	143	1,587	1,693	1,990	1,688	1,704	1,767	833	0	11,405	54
Fenton	45	1,067	1,459	1,453	1,745	1,613	1,668	387	0	9,437	51
Estuary	331	992	567	1,671	1,580	1,050	838	0	0	7,029	43
Lancer	289	753	341	1,438	1,384	1,186	1,232	689	0	7,312	37
Wollaston Barge	0	0	66	140	163	145	159	0	0	673	5
Totals	**1,338**	**35,259**	**37,099**	**46,506**	**45,125**	**38,345**	**35,258**	**17,193**	**1,002**	**257,125**	

Table V summarizes the 2008 monthly number of passengers for the cable-stayed ferry sites. Historic passenger volumes for these ferries are shown in Appendix E.

Table V. Monthly Ferry Passenger Volumes for the 2008 Season

Ferry	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Total
Clarkboro	0	20775	19183	17131	22497	19443	17743	13784	296	130852
Paynton	0	5242	6008	10408	9642	7130	5743	1284	0	45457
Riverhurst	0	5164	9339	13887	11232	5534	4780	3635	1171	54742
Weldon	0	8366	9677	9441	10524	7599	7765	1761	0	55133
St. Laurent	235	5484	6151	11456	5925	5075	4972	2369	0	41667
Cecil	64	3344	3315	3917	4430	3922	3247	747	0	22986
Wingard	92	2806	4074	5627	4992	3860	3887	954	0	26292
Lemsford	434	1816	2109	3760	3323	2209	2332	1084	0	17067
Hague	201	2418	2784	3213	2810	2412	2319	1278	0	17435
Fenton	53	1643	2358	2415	3024	2478	2450	617	0	15038
Estuary	537	1788	938	3171	2934	1723	1401	0	0	12492
Lancer	405	1321	550	2426	2226	1954	2011	1025	0	11918
Totals	**2,021**	**60,167**	**66,486**	**86,852**	**83,559**	**63,339**	**58,650**	**28,538**	**1,467**	**451,079**

Passenger volumes were first recorded in 2000, except for Riverhurst and St. Laurent where volumes have been recorded since 1996 and 2003 respectively.

Ferry operators record the type of vehicles using the ferries. The breakdown of vehicle types is summarized in the charts below. The Wollaston Barge ferry is not included in these graphs because it uses a unique classification scheme.

Chart 4.0A 2008 Straight Trucks by Location

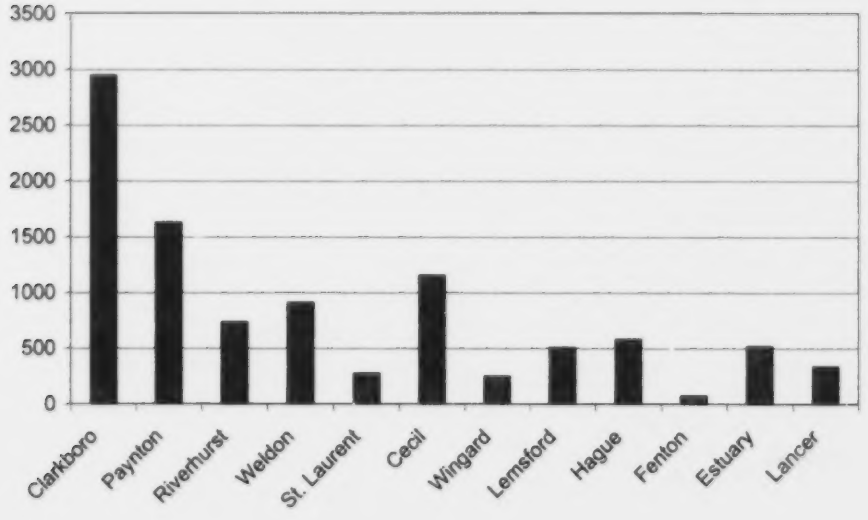


Chart 4.0B 2008 Single Trailer Trucks by Location

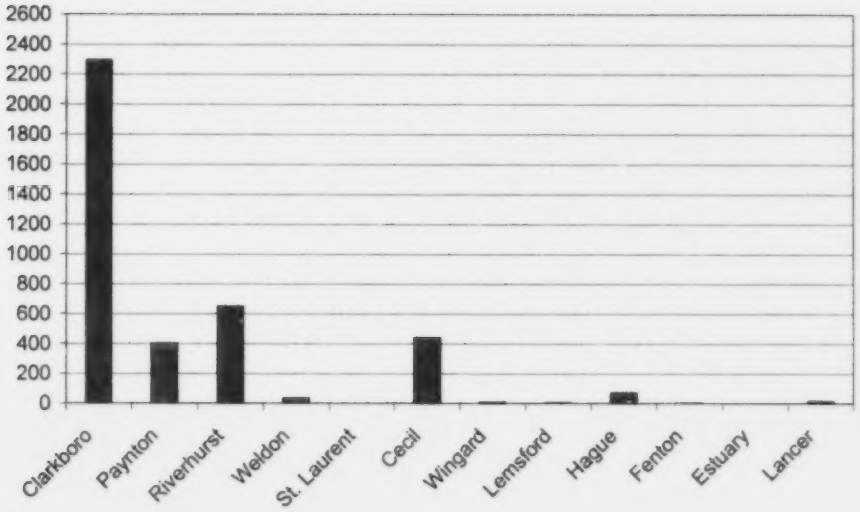
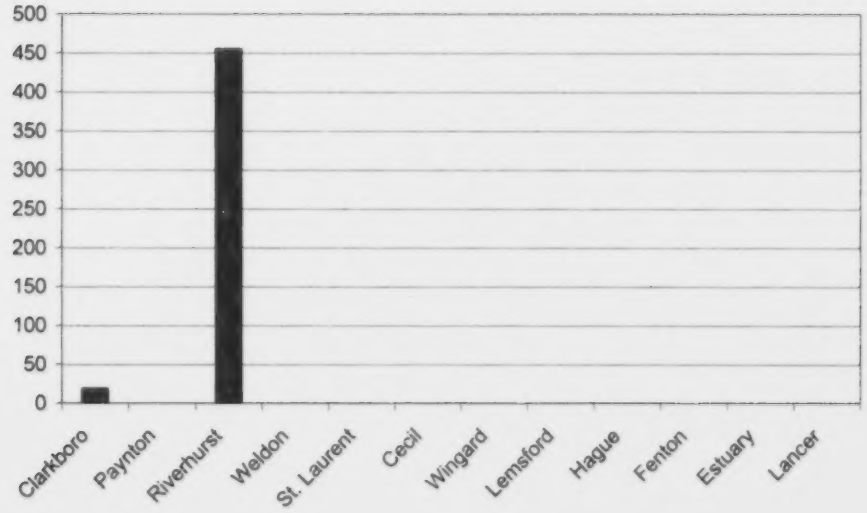
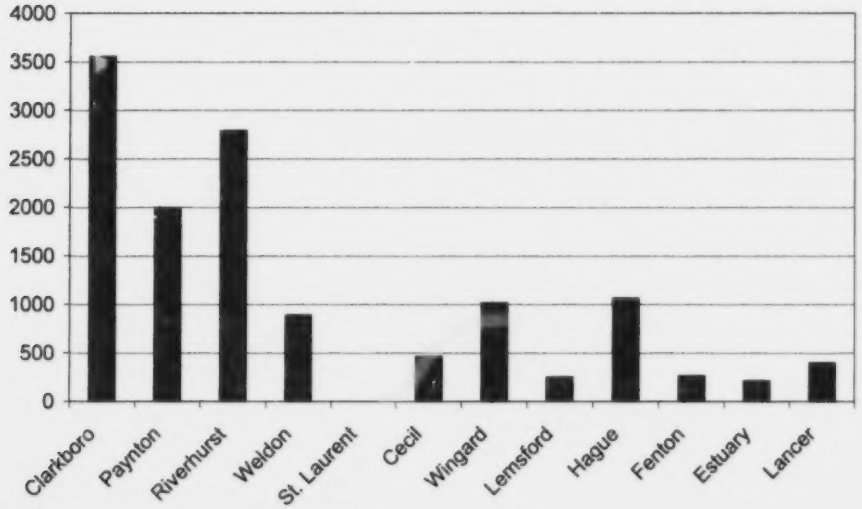


Chart 4.0C 2008 Multi Trailer Trucks by Location



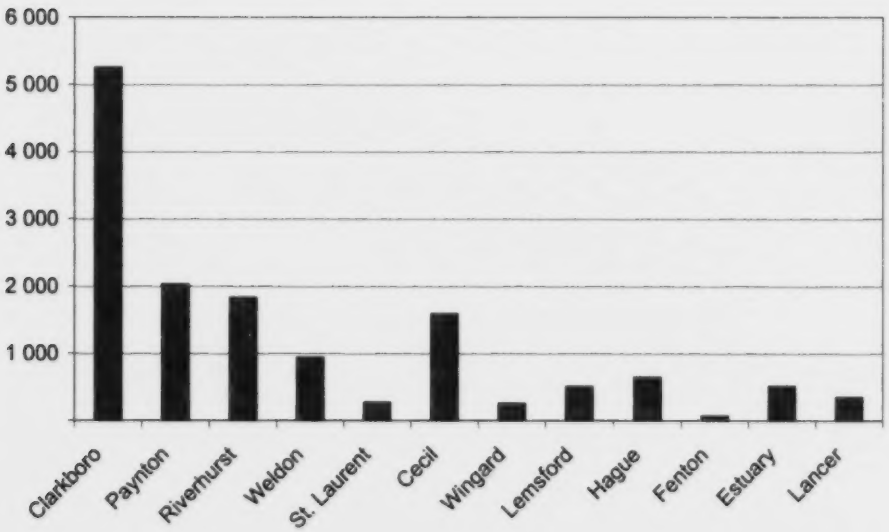
Most ferries are not long enough to accommodate multi trailer trucks.

Chart 4.0D 2008 Other Vehicles by Location



The vehicle category "other" normally refers to farm or construction equipment except near recreation areas, where they are often recreational vehicles or passenger vehicles pulling a boat or camping trailer.

Chart 4.0E 2008 Commercial Vehicles by Location

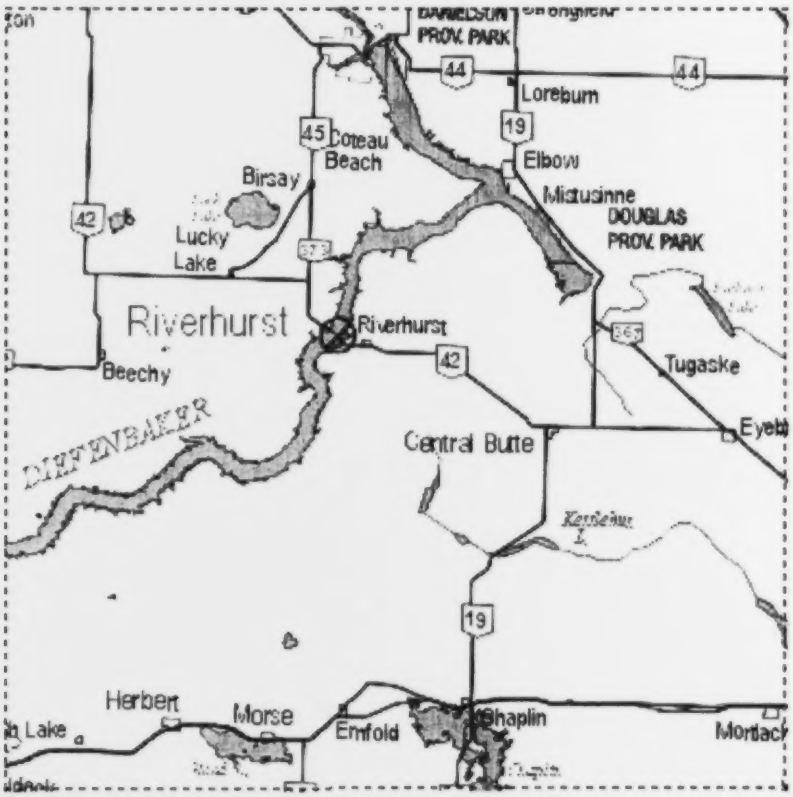


The commercial vehicles shown above only contain straight, single and multi trailer trucks. The "other" vehicles are not included because they are typically not hauling freight or commodities.

5.0 Site by Site Analysis

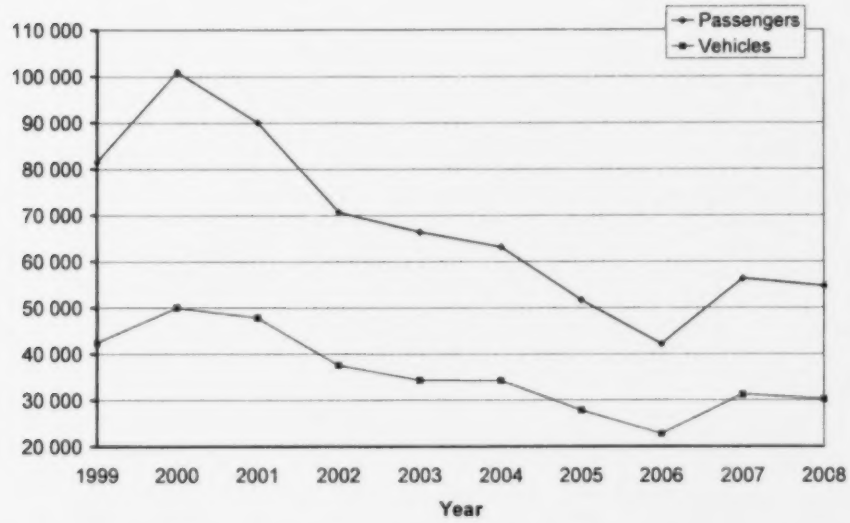
The ferry traffic data in this section are summarized by Ministry maintenance area. The area by area analysis results in six groupings: Moose Jaw, North Battleford, Prince Albert, Saskatoon, Swift Current and Wollaston.

5.1 Moose Jaw Area



The Moose Jaw area contains only the Riverhurst ferry, which is the largest and most sophisticated cable-stayed ferry in the province. This is the only ferry in the system located on a provincial highway. The Riverhurst ferry carries traffic on Highway 42 across the 2 km width of Lake Diefenbaker.

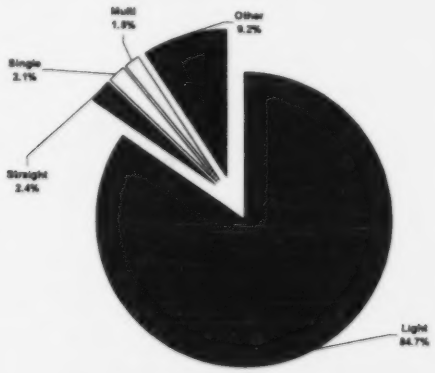
Chart 5.1A 10 Year History of Traffic on the Riverhurst Ferry



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Average
Vehicles	42 424	50 010	47 867	37 578	34 288	34 258	27 829	22 741	31 245	30 203	**35 844**
Passengers	81 526	100 979	90 056	70 700	66 422	63 193	51 692	42 213	56 320	54 742	**67 784**
ADT	174	216	204	176	169	153	127	144	139	138	**164**
Truck %	7.9	5.5	7.0	7.7	7.0	6.4	6.3	5.5	6.5	6.1	**6.6**

Traffic on the Riverhurst ferry decreased by 3% compared to 2007. The 2008 ADT decreased by 1% from 2007. The reasons for the decrease in vehicles carried were the decrease in length of the operating season and the increase in downtime throughout the season. The operating season in 2008 was seven days shorter than in 2007. Downtime increased by 75.5 hours in 2008, largely due to cable malfunctions, mechanical errors and high winds.

Chart 5.1B Vehicle Types Using the Riverhurst Ferry

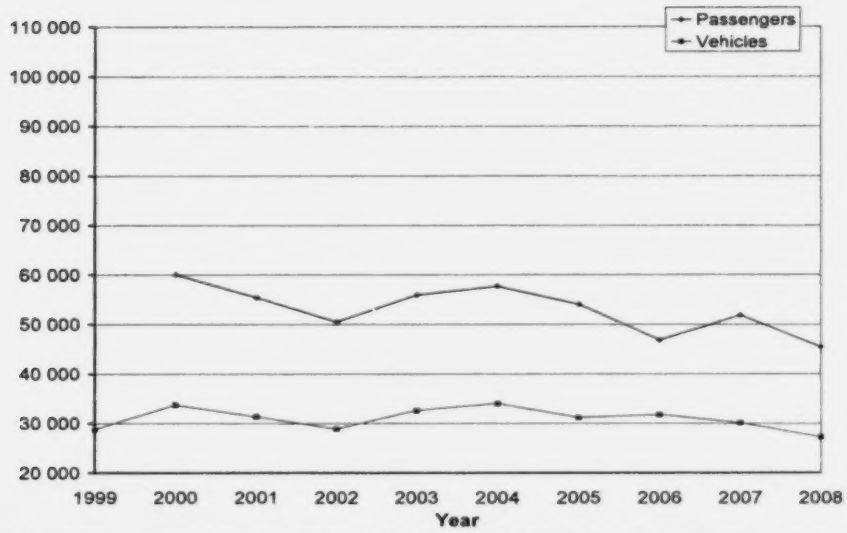


Riverhurst ferry had a high percentage of "other" vehicles.

5.2 *North Battleford Area*

The North Battleford area has only the Paynton ferry.

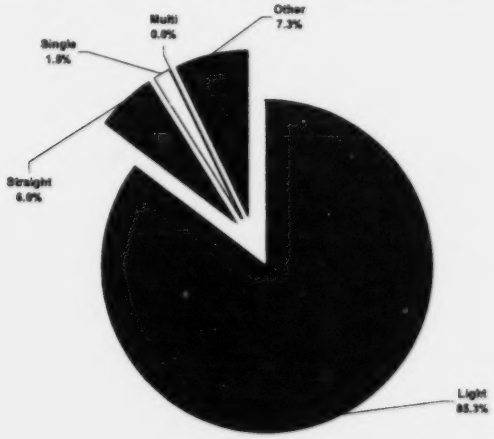
Chart 5.2A 10 Year History of Traffic on the Paynton Ferry



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Average
Vehicles	28 808	33 749	31 348	28 910	32 603	33 996	31 155	31 752	30 111	27 270	**30 970**
Passengers		60 119	55 475	50 577	56 014	57 743	54 100	46 889	51 909	45 457	**53 143**
ADT	141	170	158	167	175	180	161	169	162	152	**163**
Truck %	10.3	11.0	12.0	14.0	13.2	12.1	11.4	12.3	10.4	7.4	**11.4**

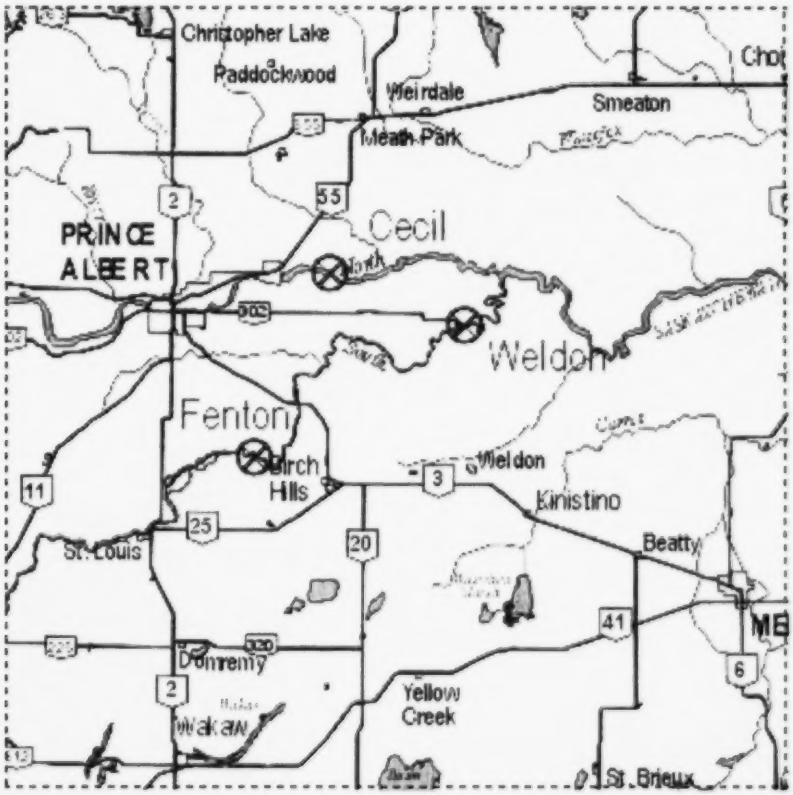
In 2008, traffic on the Paynton ferry decreased by 9%. The ADT decreased by 6% to significantly below the ten year average.

Chart 5.2B Vehicle Types Using the Paynton Ferry



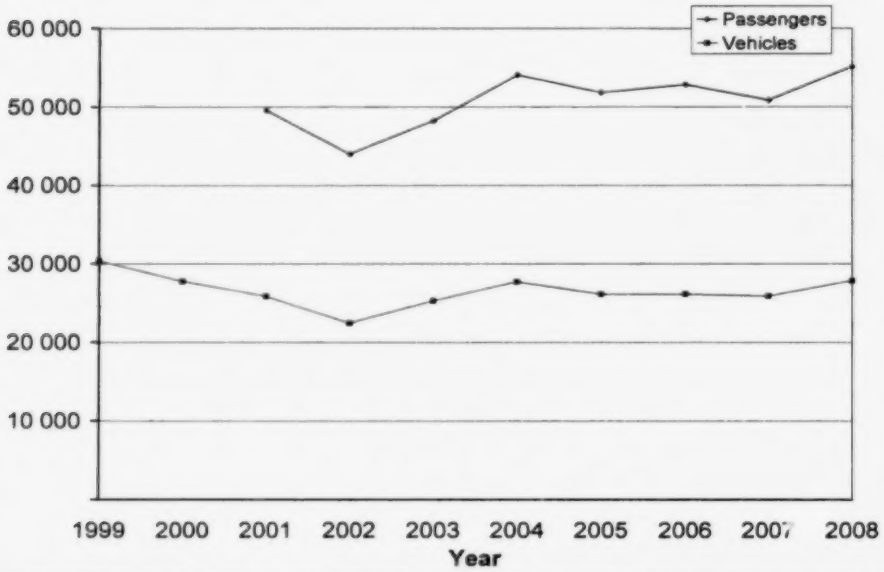
Paynton serves as a freight haul link to Highway 16, as demonstrated by the high percentage of trucks that used the ferry in 2008.

5.3 *Prince Albert Area*



The Prince Albert area includes the Weldon, Cecil and Fenton ferries.

Chart 5.3A 10 Year History of Traffic on the Weldon Ferry



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Average
Vehicles	30 382	27 770	25 875	22 461	25 308	27 709	26 124	26 137	25 887	27 838	**26 549**
Passengers			49 555	44 007	48 249	54 082	51 835	52 851	50 847	55 133	**50 820**
ADT	159	141	135	133	142	141	144	144	137	146	**142**
Truck %	5.1	4.5	5.2	3.8	5.9	3.8	3.4	3.1	3.5	3.4	**4.2**

In 2008, traffic on the Weldon ferry increased by 8% compared to 2007. The ADT increased by 7% to slightly above the ten year average.

Chart 5.3B Vehicle Types Using the Weldon Ferry

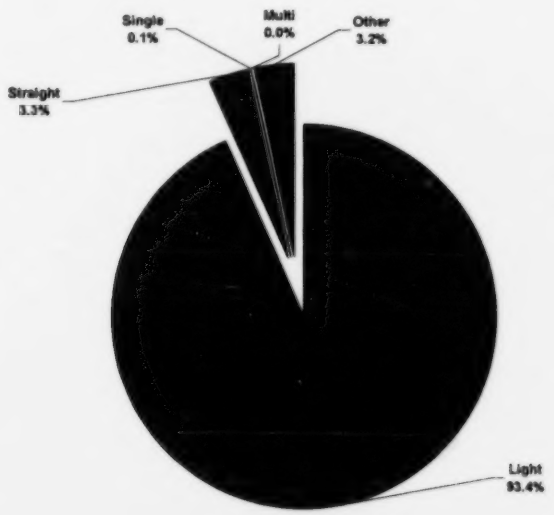
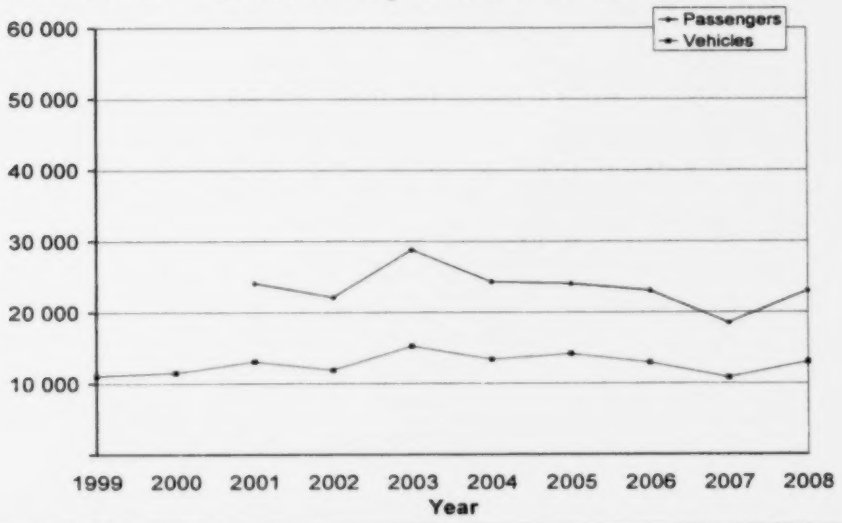


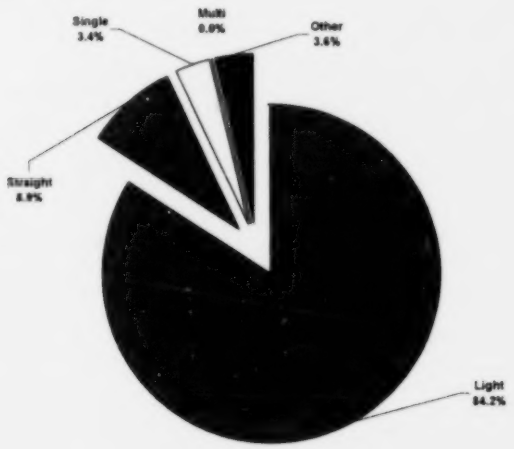
Chart 5.3C 10 Year History of Traffic on the Cecil Ferry



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Average
Vehicles	11 016	11 484	13 073	11 873	15 254	13 368	14 151	12 897	10 774	12 987	**12 688**
Passengers			24 098	22 112	28 819	24 310	24 015	23 052	18 505	22 986	**23 487**
ADT	58	57	67	71	86	69	74	69	59	68	**68**
Truck %	10.8	9.5	10.1	9.1	10.0	9.1	7.7	8.9	7.0	12.2	**9.4**

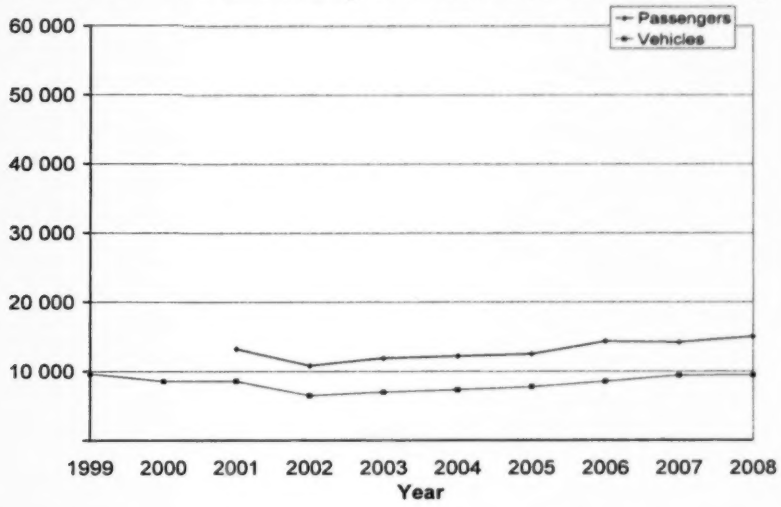
The 2008 Cecil ferry traffic increased from 2007 by 21%. The ADT increased by 15% and was equal to the ten year average.

Chart 5.3D Vehicle Types Using the Cecil Ferry



The percentage of Straight Trailer trucks increased in 2008. Cecil had the highest truck traffic percentage of the cable-stayed ferries.

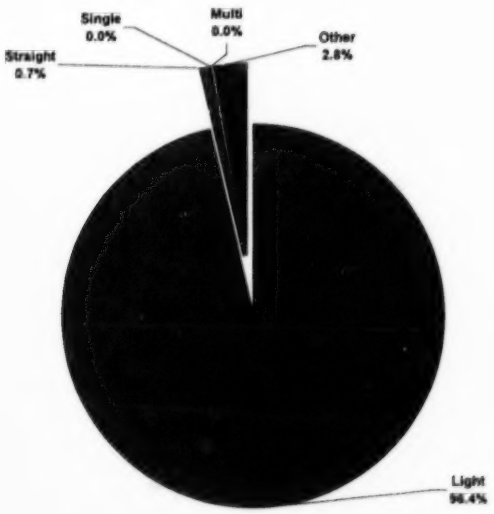
Chart 5.3E 10 Year History of Traffic on the Fenton Ferry



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Average
Vehicles	9 640	8 533	8 563	6 461	6 974	7 306	7 738	8 519	9 394	9 437	**8 257**
Passengers			13 236	10 835	11 909	12 209	12 517	14 341	14 195	15 038	**13 035**
ADT	51	45	45	40	41	38	43	47	50	51	**45**
Truck %	2.8	1.2	1.0	0.8	1.8	0.7	0.5	0.5	0.4	0.8	**1.0**

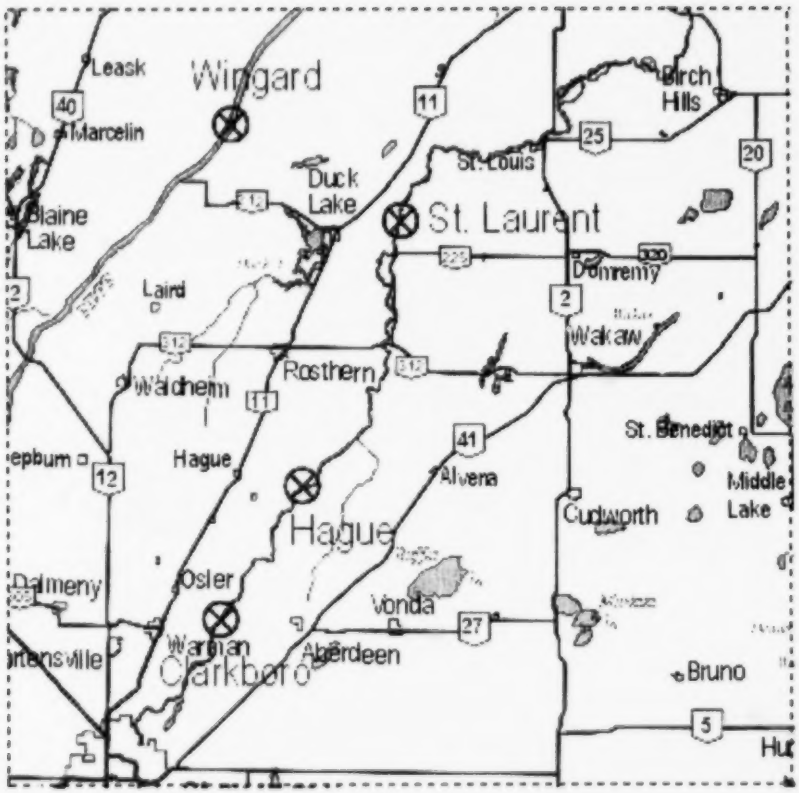
Traffic on the Fenton ferry stayed relatively constant between 2007 and 2008. The 2008 ADT showed a slight increase of 3%.

Chart 5.3F Vehicle Types Using the Fenton Ferry



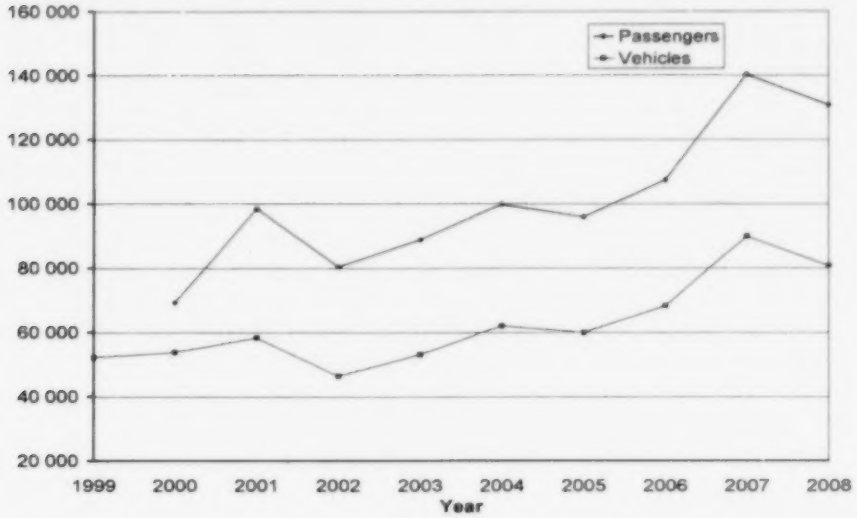
Traffic on the Fenton ferry was almost exclusively passenger vehicles.

5.4 *Saskatoon Area*



The Saskatoon area contains four ferries: Clarkboro, St. Laurent, Wingard and Hague.

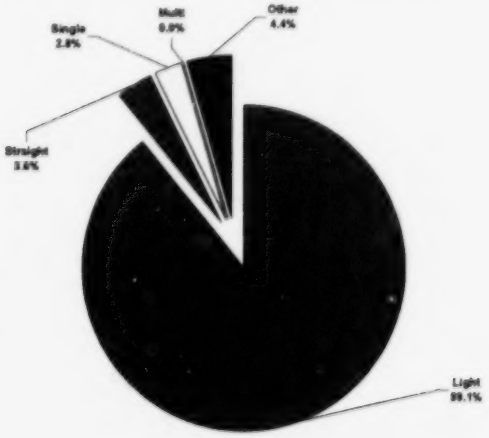
Chart 5.4A 10 Year History of Traffic on the Clarkboro Ferry



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Average
Vehicles	52 185	53 780	58 303	46 374	53 066	62 005	59 852	68 246	89 880	80 672	**62 436**
Passengers		69 292	98 654	80 526	88 909	99 892	95 977	107 442	140 307	130 852	**101 317**
ADT	234	255	255	234	276	278	298	327	405	373	**293**
Truck %	4.0	4.6	5.0	3.9	4.4	4.0	4.9	4.9	5.7	6.5	**4.8**

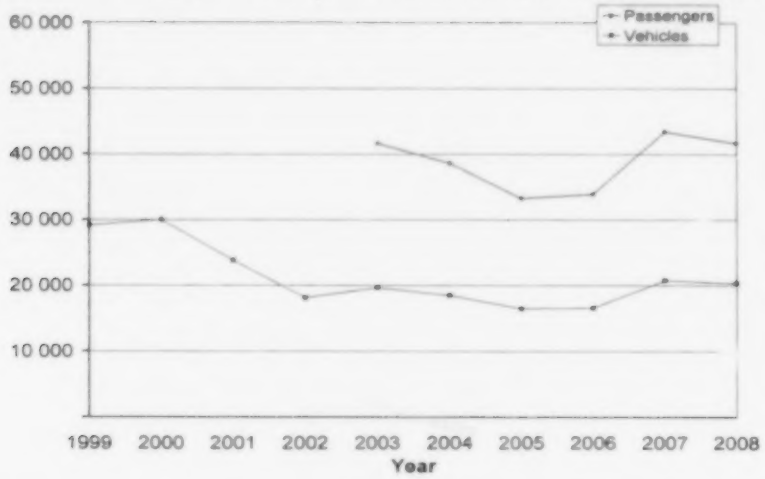
Traffic on the Clarkboro ferry decreased by 10% in 2008 from 2007 but stayed significantly above the ten year average. ADT decreased by 8% but also stayed significantly above the ten year average.

Chart 5.4B Vehicle Types Using the Clarkboro Ferry



The Clarkboro ferry has the highest amount of traffic and the highest ADT among Saskatchewan's ferries.

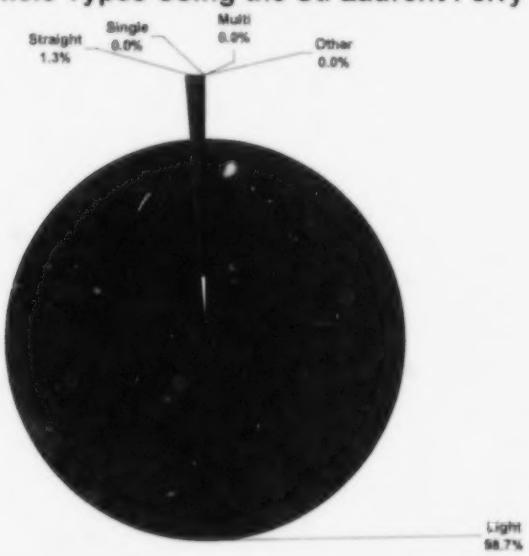
Chart 5.4C 10 Year History of Traffic on the St. Laurent Ferry



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Average
Vehicles	29 143	29 980	23 796	18 102	19 661	18 474	16 438	16 550	20 752	20 305	**21 320**
Passengers					41 656	38 612	33 252	33 897	43 409	41 667	**38 749**
ADT	130	147	111	99	107	88	84	86	97	98	**105**
Truck %	1.8	1.9	2.6	3.8	1.6	1.2	2.8	1.9	2.3	1.3	**2.1**

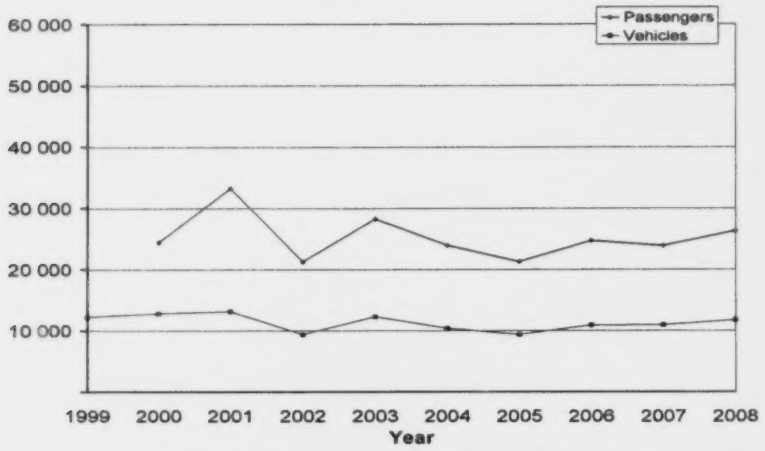
Traffic on the St. Laurent ferry decreased by 2% in 2008 compared to 2007 traffic. The 2008 ADT increased 1% from 2007.

Chart 5.4D Vehicle Types Using the St. Laurent Ferry



The St. Laurent ferry carries predominantly passenger vehicles.

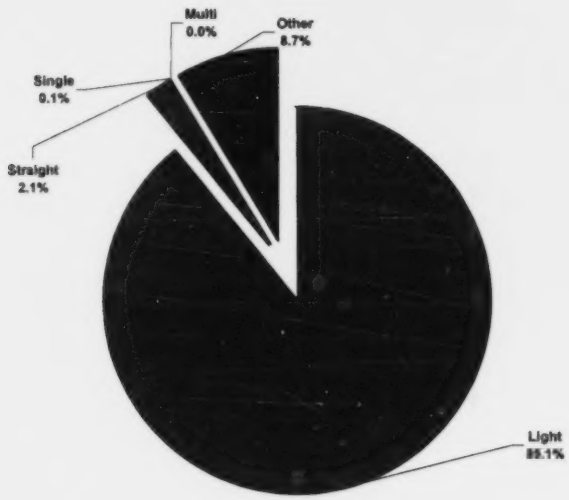
Chart 5.4E 10 Year History of Traffic on the Wingard Ferry



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Average
Vehicles	12 227	12 791	13 158	9 368	12 276	10 390	9 375	10 898	10 915	11 736	**11 313**
Passengers		24 417	33 260	21 271	28 299	23 954	21 305	24 725	23 886	26 292	**25 268**
ADT	63	63	66	54	66	54	49	57	57	61	**59**
Truck %	4.2	3.4	3.2	3.9	5.0	4.3	3.5	2.3	2.3	2.2	**3.4**

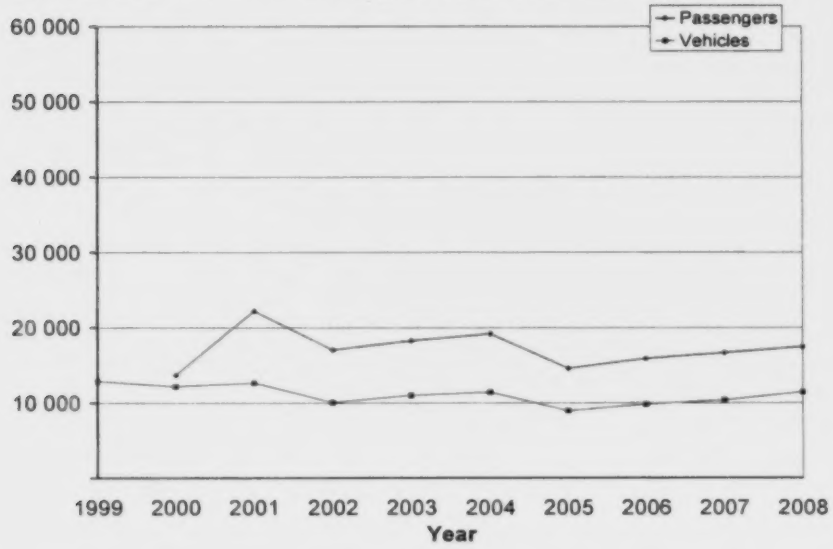
Traffic on the Wingard ferry increased 8% in 2008 from 2007. ADT in 2008 increased 7%.

Chart 5.4F Vehicle Types Using the Wingard Ferry



Wingard ferry had a high percentage of "other" vehicles.

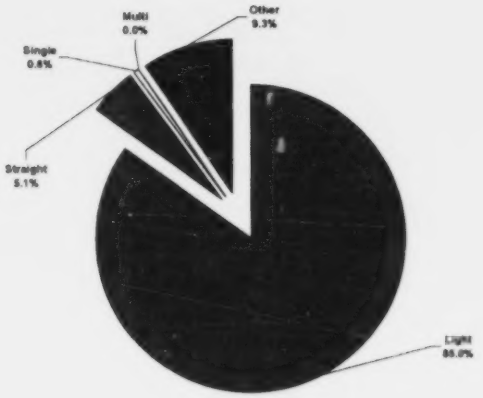
Chart 5.4G 10 Year History of Traffic on the Hague Ferry



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Average
Vehicles	12 845	12 156	12 652	10 006	10 963	11 368	8 906	9 772	10 330	11 405	**11 040**
Passengers		13 705	22 221	17 040	18 254	19 189	14 580	15 885	16 639	17 435	**17 216**
ADT	58	61	59	55	59	54	51	50	49	54	**55**
Truck %	6.4	6.4	4.6	4.8	6.4	5.1	6.4	5.3	5.4	5.7	**5.7**

Traffic on the Hague ferry increased by 10% in 2008, approximately equaling the ten year average. The 2008 ADT increased by 10% also approximately equaling the ten year average.

Chart 5.4H Vehicle Types Using the Hague Ferry

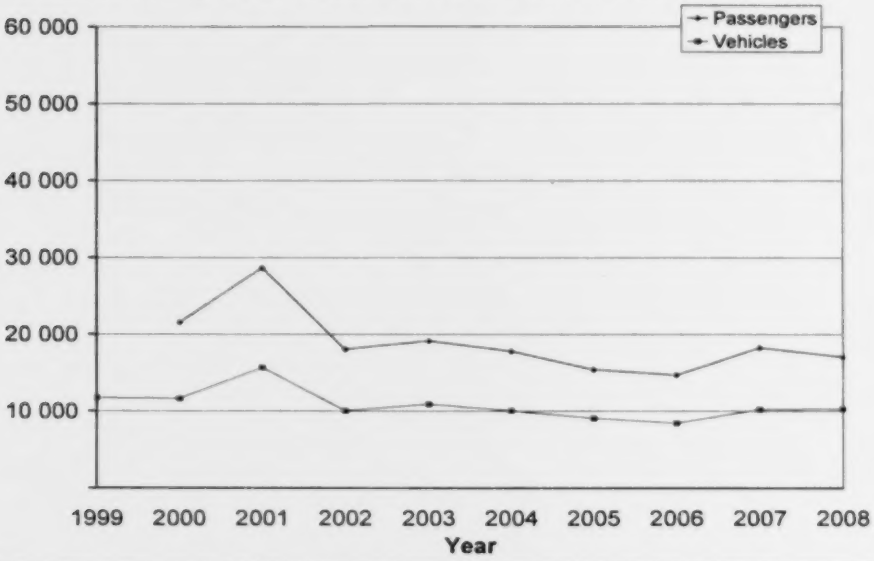


The Hague ferry had the highest percentage of "other" vehicles.

5.5 Swift Current Area

The Swift Current area has three ferries: Lemsford, Estuary and Lancer.

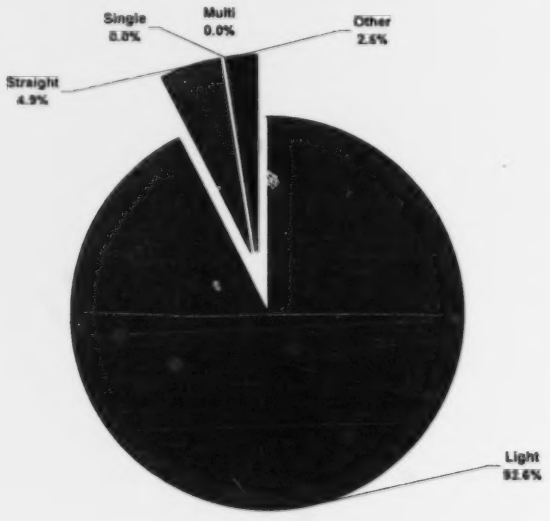
Chart 5.5A 10 Year History of Traffic on the Lemsford Ferry



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Average
Vehicles	11 730	11 623	15 659	10 031	10 885	10 040	9 042	8 418	10 197	10 258	**10 788**
Passengers		21 548	28 651	18 050	19 129	17 797	15 406	14 708	18 233	17 067	**18 954**
ADT	52	58	69	55	59	48	48	44	47	48	**53**
Truck %	3.9	3.6	2.5	5.2	5.8	5.1	3.4	3.3	2.9	5.0	**4.1**

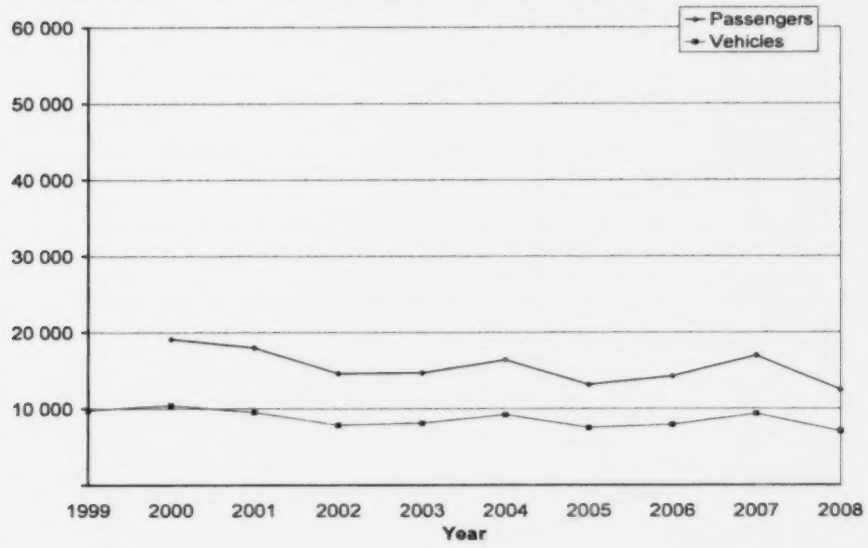
Traffic volume on the Lemsford ferry stayed relatively constant between 2007 and 2008. The 2008 ADT increased 2% from 2007.

Chart 5.5B Vehicle Types Using the Lemsford Ferry



The vast majority of traffic on the Lemsford ferry was passenger vehicles.

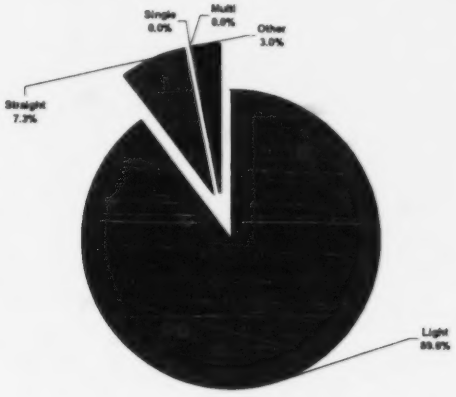
Chart 5.5C 10 Year History of Traffic on the Estuary Ferry



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Average
Vehicles	9 793	10 437	9 541	7 847	8 096	9 200	7 496	7 888	9 326	7 029	**8 665**
Passengers		19 152	18 045	14 631	14 728	16 435	13 156	14 266	16 968	12 492	**15 541**
ADT	44	52	48	48	49	46	44	43	45	43	**46**
Truck %	9.3	5.4	4.7	8.9	6.1	7.5	6.3	6.3	4.8	7.3	**6.7**

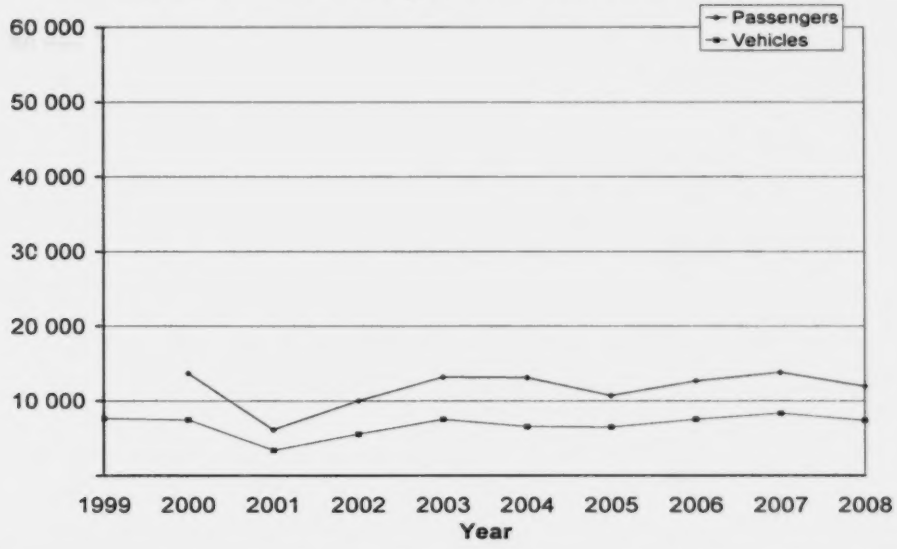
Traffic on the Estuary ferry decreased 25% in 2008 to the lowest value in ten years. This was primarily due to a shortened operating season in 2008. As shown in Appendix E, the ferry was shut down approximately 22 days because of high water. The 2008 ADT decreased 5% from 2007.

Chart 5.5D Vehicle Types Using the Estuary Ferry



The percentage of trucks using the Estuary ferry has increased in 2008 for the first time since 2004. This ferry also carried the second highest percentage of straight trucks, next to the Cecil ferry.

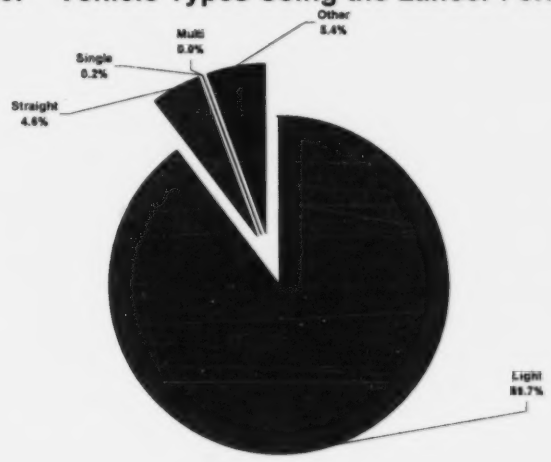
Chart 5.5E 10 Year History of Traffic on the Lancer Ferry



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Average
Vehicles	7 604	7 421	3 324	5 503	7 490	6 498	6 461	7 490	8 270	7 312	**6 737**
Passengers		13 668	6 113	9 992	13 174	13 090	10 694	12 662	13 790	11 918	**11 678**
ADT	34	37	34	32	40	31	37	39	40	37	**36**
Truck %	4.0	3.7	2.3	3.9	6.7	6.4	4.8	6.6	4.7	4.8	**4.8**

In 2008, the traffic on the Lancer ferry decreased 12%. The 2008 ADT decreased 6% from 2007.

Chart 5.5F Vehicle Types Using the Lancer Ferry

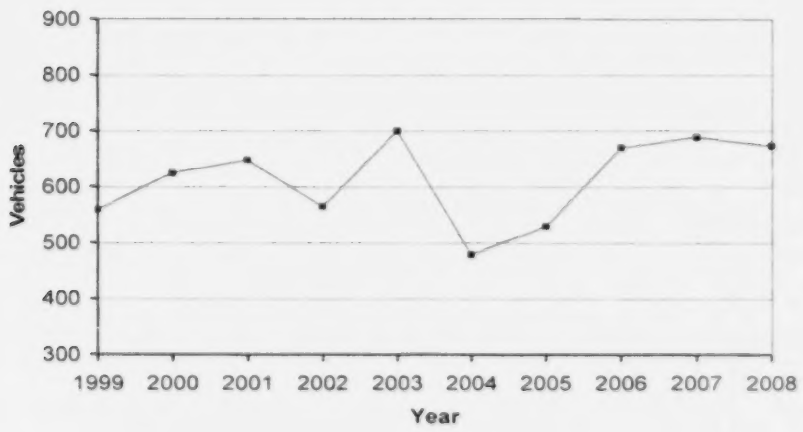


The percentage of light vehicles using the Lancer ferry in 2008 was lower than in any of the last ten years.

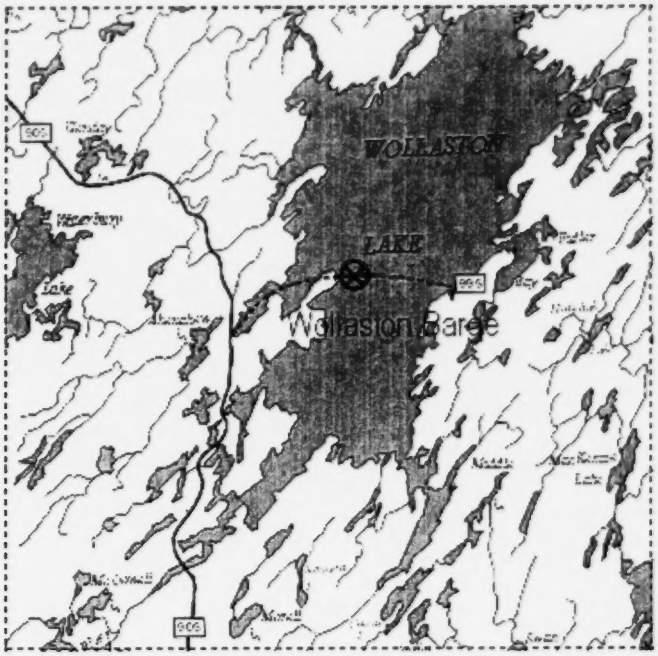
5.6 Wollaston Barge Ferry

The Wollaston Barge ferry connects the community of Wollaston Lake to Highway 905. This vessel is unique because it is the only free-swimming ferry operated in the province and is the only ferry that charges a fee. The Hatchet Lake Denesuline First Nation operates the ferry under contract to the Ministry. The operational season at Wollaston Lake was shorter than other ferries in the province due to the northern location. This ferry carries significantly lower traffic volumes than the southern ferries because the length of the crossing allows a maximum of only three round trips each day.

Chart 5.6A Eight Year History of Traffic on the Wollaston Barge Ferry



5.6 *Wollaston Barge Ferry*



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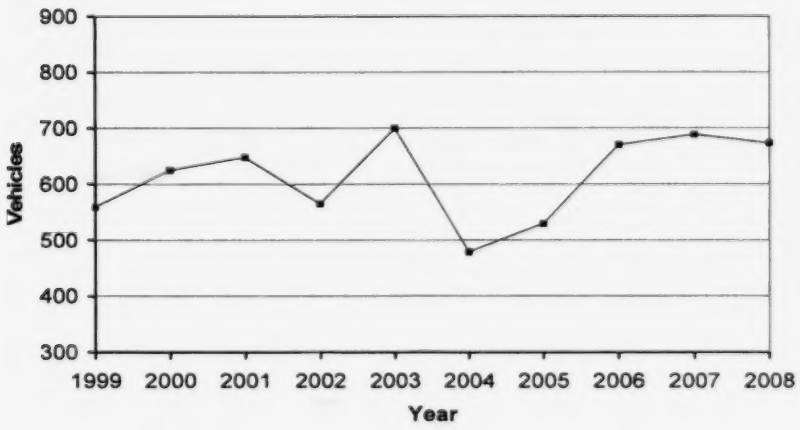
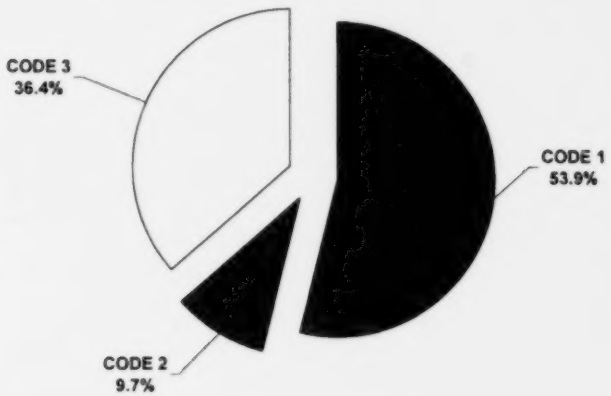


	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Vehicles	559	625	648	565	700	479	529	670	668	673
ADT	5	5	6	5	5	5	5	5	5	5
Truck %	38.3	42.7	41.5	45	42.6	38.8	34	34.5	32.7	46.1

In 2007, traffic on the Wollaston Barge remained basically unchanged. The 2008 ADT was the same as the 2007 ADT and was also the same as the eight year average.

The vehicle classification system used at Wollaston is different than that used by the rest of the ferry system. The three codes used at the Wollaston Barge ferry are based on the fee structure charged to the different vehicle types.

Chart 5.6B Vehicle Types Using the Wollaston Barge Ferry



Code 1 - Single Light Vehicle - car, truck (less then a 1 ton), motorcycle, etc.

Code 2 - Other - includes single vehicles with trailer, trucks over one ton, etc.

Code 3 - Full - Any semi trailer, construction equipment, etc.

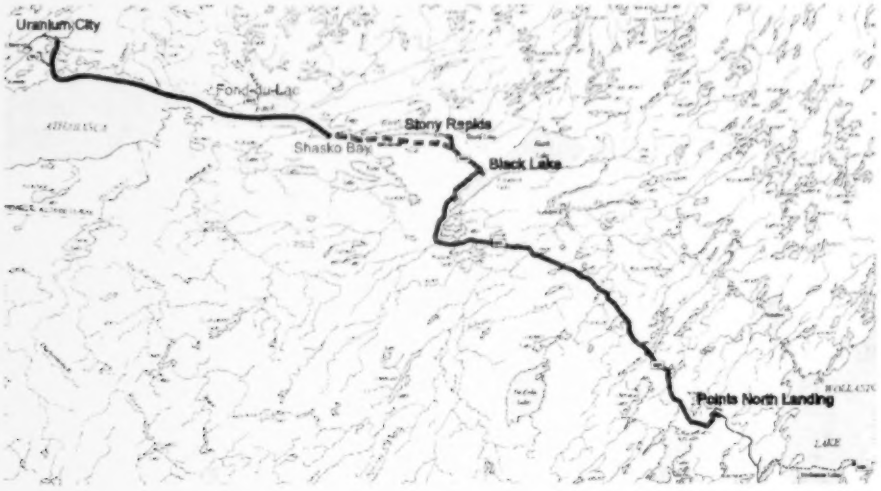
The Wollaston ferry carried the highest percentage of commercial vehicles in the province at approximately 46.1%. Other than by air, this ferry provides the only summer access to Wollaston Lake. There are few passenger trips because the community is small and the trip to the nearest community is quite long.

6.0 Seasonal/Winter Roads

All four seasonal/winter roads were operated by the Ministry in 2007. The four seasonal roads are the Cumberland House road (52 km), the Wollaston Lake road (46 km), the Athabasca road (358 km) and the Riverhurst ice road (2.4 km). Seasonal/winter roads are a vital link to the northern communities. They provide economical access to heavy and bulk commodities like fuel and building materials.

The length of the operating season for the seasonal/winter roads varies from year to year depending on winter conditions. Local traffic often uses the roads outside of the official season. The ice has to be sufficiently thick and the road completely constructed before the Ministry officially opens a seasonal/winter road to travel.

6.1 Athabasca Seasonal/Winter Road



The Athabasca seasonal/winter road was maintained by the Athabasca Basin Development Corporation under contract to the Ministry. Four separate road sections form the Athabasca seasonal/winter road. Over 185 km from Points North Landing to Black Lake is currently a bladed trail that requires extensive yearly repair work. The road from Stony Rapids to Shasko Bay was a winter-only road and the two sections from Shasko Bay to Uranium City are ice roads across Lake Athabasca. In recent years administrative information related to the two middle sections, Stony Rapids to Shasko Bay and Shasko Bay to Fond-du-Lac, has been collected as one section from Stony Rapids to Fond-du-Lac. The combined lengths and operating costs for the section are listed in Table VII.

The combined length of the seasonal/winter road sections from Points North to Uranium City was 358 km. The 2007-08 cost of building and maintaining the four seasonal/winter road sections was $2,198,915.58 for a unit cost of $6,142 per km. Historical data for the sections are shown in the tables that follow:

6.0 Seasonal/Winter Roads

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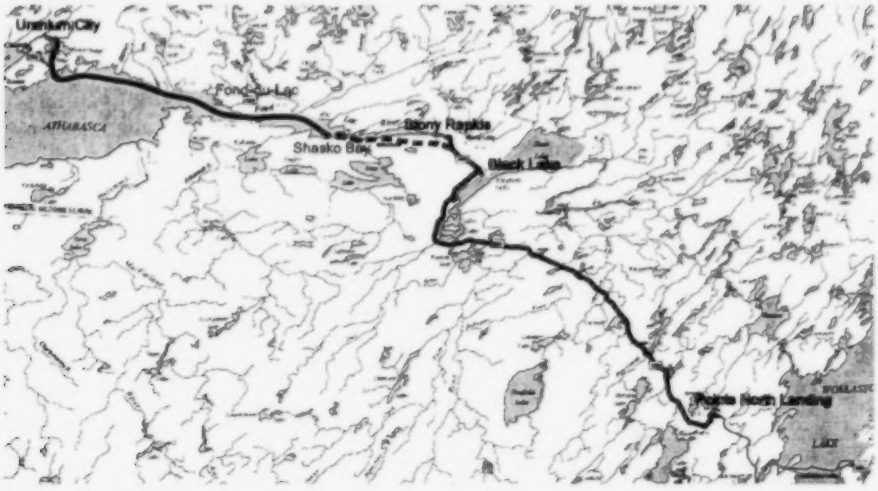

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Table VI. History of the Athabasca Seasonal/Winter Road (Points North to Black Lake)

Year	Opening	Closing	Length (days)	Length (km)	Cost
2002-03	N/A	N/A		180	$866,523
2003-04	N/A	Mar 31		183	$1,182,483
2004-05	N/A	Apr 04		183	$1,106,954
2005-06	N/A	N/A		183	$835,103
2006-07	Mar 31	Jun 06	68	183	$1,182,483
2007-08	Mar 31	Jun 06	68	183	$1,556,065

* There were no official opening or closing dates in 2003 or 2006

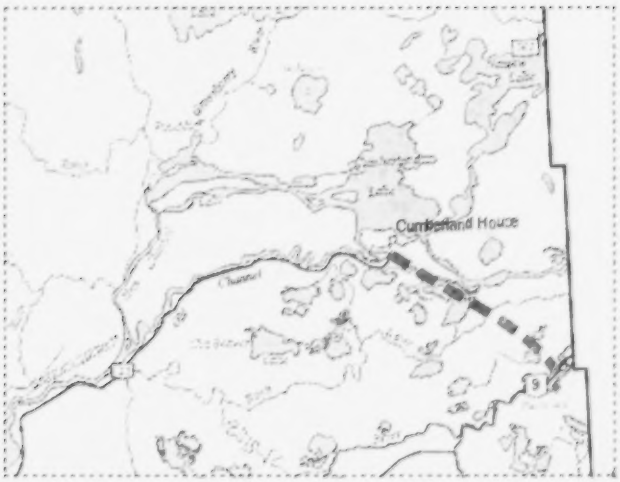
Table VII. History of the Athabasca Seasonal/Winter Road (Stony Rapids to Fond-du-Lac)

Year	Opening	Closing	Length (days)	Length (km)	Cost
2002-03	Feb 10	Mar 31	50	83.6	$215,046
2003-04	Feb 11	Mar 31	50	82	$172,255
2004-05	Feb 10	Apr 04	54	82	$194,918
2005-06	Mar 02	Mar 31	29	82	$176,100
2006-07	Feb 07	Mar 31	52	82	$172,255
2007-08	Feb 07	Mar 31	52	82	$331,984

Table VIII. History of the Athabasca Seasonal/Winter Road (Fond du Lac to Uranium City)

Year	Opening	Closing	Length (days)	Length (km)	Cost
2002-03	Feb 17	Mar 15	27	92	$99,208
2003-04	Mar 01	Mar 18	18	93	$60,000
2004-05	Mar 08	Apr 06	30	93	$104,292
2005-06	Mar 17	Mar 31	14	93	$94,932
2006-07	Mar 05	Mar 31	26	93	$60,000
2007-08	Mar 05	Mar 31	26	93	$160,999

6.2 *Cumberland House Winter Road*



The Cumberland House winter road was first operated in 1992-1993. The Cumberland House road was 53 km long and intersects with the north end of Highway 9 just west of the Manitoba boundary. The first 17 km were significantly improved in 2004-05. The roadway was widened and sight distances were improved. These first 17 kms were maintained by Weyerhaeuser.

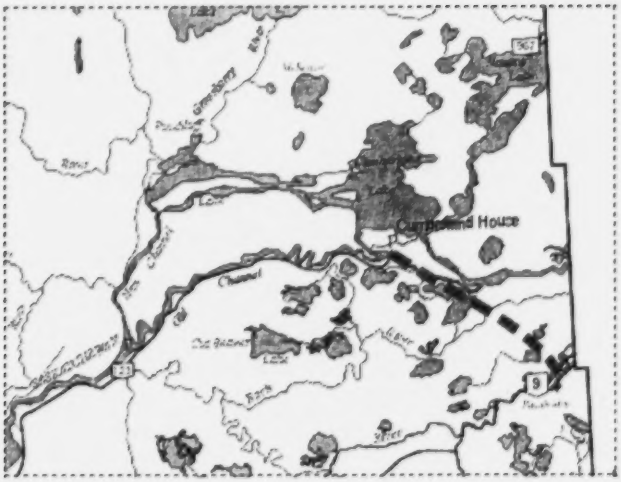
The winter road was officially open to traffic for 70 days in 2007-08. However, the winter road was also unofficially open for 16 days prior to the official opening, as a bombardier was used to tramp the muskeg. An estimated 30 vehicles per day used the road, for a total of 2100 vehicles during the operating season. Total Ministry expenditures for the Cumberland House road in the 2007-08 fiscal year were $37,342.00 for a unit cost of $705 per km, $533 per day of operation, or about $18 per vehicle. The 10 year history of the Cumberland House winter road is shown in the table below.

Table IX. 10 Year History of the Cumberland Winter Road

Year	Opening	Closing	Length (days)	Cost
1998-99	Dec 8	Mar 3	86	$4,524
1999-2000	Jan 5	Mar 22	78	$4,500
2000-01	Jan 3	Mar 14	71	$14,242
2001-02	Jan 11	Mar 28	77	$13,113
2002-03	Jan 22	Mar 21	59	$18,952
2003-04	Jan 30	Apr 2	64	$22,424
2004-05	Dec 30	Mar 31	92	$46,575*
2005-06	Feb 9	Mar 24	44	$12,252
2006-07	Feb 3	Mar 20	47	$33,585
2007-08	Jan 24	Apr 2	70	$33,585

* Widening and Sight Distance Improvements

6.2 Cumberland House Winter Road



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2007-08	Jan 24	Apr 2	70	$33,585

* Widening and Sight Distance Improvements

6.3 *Riverhurst Winter Road*

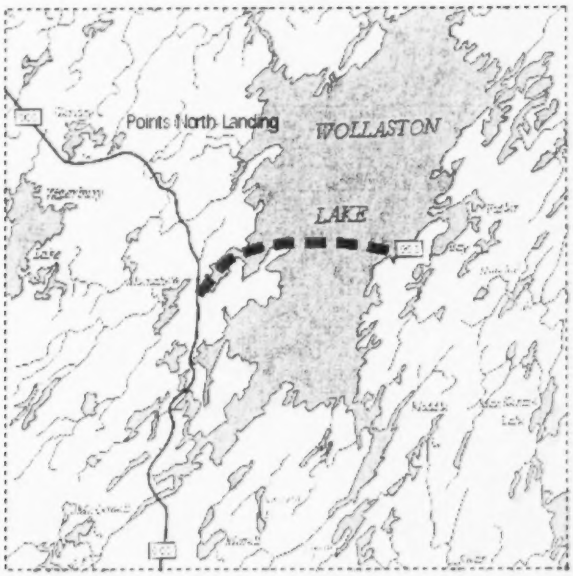
The Riverhurst ice road has operated intermittently for many years. In years when an official road is opened, the Ministry establishes and maintains it. The Ministry did operate the Riverhurst ice road in 2007-08. Local residents may sometimes create a winter trail across the ice in the years that the Ministry opts not to open a winter road. There is no official operational record for those years.

The Riverhurst ice road was opened on February 3, 2008 and closed on March 12, 2008 for a total of 38 days of operation. The total cost to operate the road for the year was $13,854.00 or $365 per day of operation. The ten year history of the Riverhurst Ice Road is shown in the table below.

Table XI. 10 Year History of the Riverhurst Ice Road

Year	Opening	Closing	Length(days)	Cost
1998-99	Feb 1	Mar 19	47	N/A
1999-2000	N/A	N/A		N/A
2000-01	Mar 4	Mar 12	9	N/A
2001-02	N/A	N/A		N/A
2002-03	Feb 21	Mar 15	23	$16,547
2003-04	Feb 4	Mar 10	36	$60,782
2004-05	Feb 4	Mar 6	31	$21,000
2005-06	N/A	N/A		N/A
2006-07	Jan 26	Mar 9	42	$15,402
2007-08	Feb 3	Mar 12	38	$13,854

6.4 Wollaston Lake Winter Road

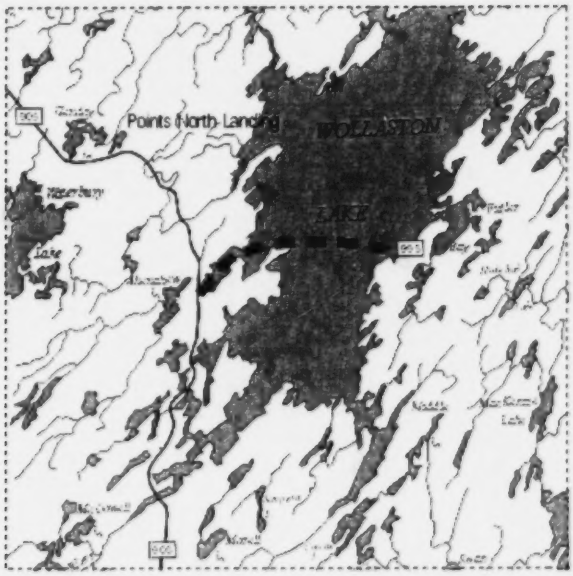


The Wollaston Lake ice road was 46 km long and crosses the ice on Wollaston Lake to provide access to the residents of the community of Wollaston Lake. The road was established and maintained by the Hatchet Lake Denesuline First Nation under contract to the Ministry. The total operating cost was $172,500 for a unit cost of $3,750 per km and $2,537 per day. An estimated 200 vehicles per week used the roadway, for a total of 2,000 vehicles during the operating season. The operational history of the Wollaston Lake ice road is shown in the table below.

Table XI. History of the Wollaston Lake Ice Road

Year	Opening	Closing	Length(days)	Cost
1999-00	Jan 17	Mar 31	75	$126,666
2000-01	Feb 20	Apr 08	46	$95,844
2001-02	Feb 12	Apr 05	53	$99,158
2002-03	Feb 10	Apr 05	55	$124,813
2003-04	Feb 18	Mar 31	43	$100,079
2004-05	Feb 09	Apr 06	57	$97,000
2005-06	Feb 21	Mar 31	38	$124,246
2006-07	Feb 02	Mar 31	58	$100,079
2007-08	Jan 24	Mar 31	68	$172,500

6.4 Wollaston Lake Winter Road



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2007-08	Jan 24	Mar 31	68	$172,500

7.0 Conclusions

Year over year traffic fluctuations at individual ferries are related to the operating season length, river conditions and local economic activity. In 2008, the ferry system operated above the ten year average traffic levels. Some ferries were closed for a small number of days because of high water levels, high winds, sandbars and mechanical issues. Overall, the 2008 ADT was 1% lower than the 2007 ADT. The number of passengers traveling the ferries was approximately 3% lower than in 2007.

7.1 Operating Season/Downtime

- The 2008 operating season length was slightly shorter than the 2007 season.
- As in previous years, the Riverhurst ferry had the longest operating season, extending into December.
- The Estuary and Lancer ferries were closed for the longest periods of time due to high water levels and sandbars.
- Other cable-stayed ferries in Paynton, Cecil, Wingard, and Lemsford were shutdown at some point in May or June because of high water levels.
- The shutdown periods ranged from no shutdown days at four of the ferries to highs of 9.6% at Lancer, and 13.2% at Estuary.
- The operating periods for the seasonal/winter roads were longer than in 2006.

7.2 Traffic Volumes

- Clarkboro, Estuary, and Lancer ferries carried more than 10% fewer vehicles in 2008 than in 2007.
- Cecil and Hague ferries carried over 10% more vehicles in 2008 than in 2007.
- The ADT at the Clarkboro ferry dropped by 8%, while the ADT at the Paynton and Lancer ferries dropped by 6%.
- The ADT at Cecil increased by over 15% and the ADT at Weldon, Wingard, and Hague by over 5% compared with the 2007 ADT.

7.3 Vehicle Classifications

- The Wingard, Riverhurst, Paynton, and Hague ferries had a high percentage of "other" vehicles, which are normally interpreted as farming and recreational vehicles.
- The Paynton, Estuary, Lancer, Lemsford, Hague and Cecil ferries had a large percentage of straight trucks, which are used primarily for short distance hauling.
- Clarkboro, Riverhurst, Cecil, and Paynton ferries had the highest percentage of single and multi trailer semi trucks.
- The Wollaston Barge ferry had the highest percentage of trucks.
- Only the Paynton, Riverhurst, Weldon, St. Laurent and Wingard ferries had decreased truck percentages in 2008 compared with 2007.

8.0 Recommendation

Require the operators of the Wollaston Barge ferry to collect passenger volumes and implement the vehicle type classification system used at the rest of the ferries. The Traffic Engineers are prepared to assist the Wollaston Barge operators to change their vehicle classification system. The assistance could include a visit to the ferry if required.

Appendix A

Saskatchewan Highways and Transportation

Ferry Traffic Data Summary

Ferry crossing _____ Month of _____

Day	LGT	Straight Trucks	Semi Trailer	Multi Trailer	No. Pass	Other	Comments
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
Totals							

Statement Certified Correct

_____

Ferry operator

KEY

LGT	-Cars & Pickups
Straight Trucks	-Non-articulated
Semi Trailer	-Single Trailer
Multi-Trailer	-2 or more Trailers

Notes:

1) "Other" includes farm or construction equipment etc.
2) Give details of "other" in "Comments" ie: dangerous goods, equipment type, product hauled etc.

Riverhurst Ferry Traffic Data

Sheet No. _____

Date_____ Shift_____ Operators 1. _____ 2. _____

Departure Time	LGT	Straight Trucks	Semi Trailer	Multi Trailer	Other	Pass-engers	Comments	Engine R.P.M.	Weather Wind(Kmh)	Sky	Surface	Temp
Totals												

Statement Certified Correct

_____

Ferry operator

Regular crew Name (please print)	Casual crew called Name	Accept	Refuse

		Main Engine	Genset 1	Genset 2
Hourmeter	Start			
	Finish			
Engine oil pressure				
Engine Coolant temp.				
Torque Converter Temp.				
Torque Converter Pres.				
Engine oil added				
Engine Coolant added				
Torque Conv. oil added				
Transmission oil added				
Final drive oil added				
Hydraulic oil	East Ramp_____		West Ramp_____	

Remarks (Weather, Servicing, etc)

Appendix B

2007 Ferry Downtime

Ferry	Date	Hours	2008 Total Downtime	% of Time Out of Service	Reason
Riverhurst	July 24	7.5			Cable Repair
	August 7	2			Repairs
	August 13 to 14	26.5			Repairs
	August 15	6			Repairs
	August 21	4			Cable Malfunction
	September 13 to 14	30.5			Cable Malfunction
	October 7-8	17			High Wind
	October 20 to 21	7			High Wind
	October 25 to 26	19.5			High Wind
	December 2	3			High Wind
	December 13	7.5	130.5	2.5	High Wind
Paynton	May 30 to 31	34			High Water
	June 12 to 13	34			High Water
	June 16 to 17	34			High Water
	October 25	9.5			High Wind
	October 27	9	120.5	3.8	No Reason Given
Cecil	June 19 to 21	34	34	1.0	High Water
Wingard	June 2 to 3	34	34	1.0	High Water and Debris
Lemsford	May 28 to 31	53			High Water
	June 1	6			High Water
	June 14 to 17	50			High Water
	August 9 to 10	9	118	3.2	Engine Repairs
Fenton	May 14 to 23	145.67	145.67	4.5	Sandbar
Estuary	May 27 to 31	78			High Water
	June 1 to 10	160			High Water
	June 14 to 21	131			High Water
	September 11	19			High Water
	October 12 to 13	34	422	13.2	Sandbar
Lancer	May 28 to 31	68			High Water
	June 1 to 9	141			High Water
	June 13 to 22	144.5			High Water
	September 16	1.67	355.17	9.6	Repairs

Appendix C

Historic Traffic Volumes

erry	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Average
larkboro	34 674	42 448	31 975	39 338	42 991	40 839	52 185	53 780	58 303	46 374	53 066	62 005	59 852	68 246	89 880	80 672	**53 539**
aynton	42 058	30 686	30 453	30 172	34 365	32 453	28 808	33 749	31 348	28 910	32 603	33 996	31 155	31 752	30 111	27 270	**31 868**
iverhurst	40 242	40 076	41 291	36 449	50 766	45 763	42 424	50 010	47 867	37 578	34 288	34 258	27 829	22 741	31 245	30 203	**38 314**
eldon	24 754	30 465	26 268	29 657	29 455	28 003	30 382	27 770	25 875	22 461	25 308	27 709	26 124	26 137	25 887	27 838	**27 131**
t.Laurent	18 556	20 421	30 030	19 875	16 987	17 133	29 143	29 980	23 796	18 102	19 661	18 474	16 438	16 550	20 752	20 305	**21 013**
ecil	13 210	12 752	12 678	11 603	11 303	11 234	11 016	11 484	13 073	11 873	15 254	13 368	14 151	12 897	10 774	12 987	**12 479**
ingard	10 115	10 719	10 687	9 878	9 420	12 467	12 227	12 791	13 158	9 368	12 276	10 390	9 375	10 898	10 915	11 736	**11 026**
emsford	13 381	13 471	12 170	12 805	14 393	11 849	11 730	11 623	15 659	10 031	10 885	10 040	9 042	8 418	10 197	10 258	**11 622**
ague	20 883	14 442	12 425	11 961	14 577	13 122	12 845	12 156	12 652	10 006	10 963	11 368	8 906	9 772	10 330	11 405	**12 363**
enton	6 517	9 730	8 582	8 366	8 716	8 324	9 640	8 533	8 563	6 461	6 974	7 306	7 738	8 519	9 394	9 437	**8 300**
stuary	8 153	7 278	6 844	8 463	9 058	9 217	9 793	10 437	9 541	7 847	8 096	9 200	7 496	7 888	9 326	7 029	**8 479**
ancer	7 047	7 649	5 673	6 789	6 685	6 967	7 604	7 421	3 324	5 503	7 490	6 498	6 461	7 490	8 270	7 312	**6 761**
ollaston Barge							559	625	648	565	700	479	529	670	688	673	**614**
umberland	24 000	23 041	28 198	19 082	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	**23 580**
otal	**263 590**	**263 178**	**257 274**	**244 438**	**248 716**	**237 371**	**258 356**	**270 359**	**263 807**	**215 079**	**237 564**	**245 091**	**225 096**	**231 978**	**267 769**	**257 125**	**249 174**

Appendix D

Historic Average Daily Traffic (ADT)

Ferry	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Average
Clarkboro	218	206	234	255	255	234	276	278	298	327	405	373	**280**
Paynton	210	159	141	170	158	167	175	180	161	169	162	152	**167**
Riverhurst	213	190	174	216	204	176	169	153	127	131	139	141	**170**
Weldon	153	142	159	141	135	133	142	141	144	144	137	146	**143**
St.Laurent	91	85	130	147	111	99	107	88	84	86	97	98	**102**
Cecil	59	57	58	57	67	71	86	69	74	69	59	68	**66**
Wingard	50	63	63	63	66	54	66	54	49	57	57	61	**59**
Lemsford	68	58	52	58	69	55	59	48	48	44	47	48	**54**
Hague	75	68	58	61	59	55	59	54	51	50	49	54	**58**
Fenton	45	43	51	45	45	40	41	38	43	47	50	51	**45**
Estuary	44	47	44	52	48	48	49	46	44	43	45	43	**46**
Lancer	33	33	34	37	34	32	40	31	37	39	40	37	**36**
Wollaston Barge			5	5	6	5	5	5	5	5	5	5	**5**
Total	**1 261**	**1 152**	**1 204**	**1 307**	**1 255**	**1 171**	**1 276**	**1 184**	**1 165**	**1 209**	**1 291**	**1 278**	**1 229**

Appendix E

Historic Passenger Volumes

Ferry	2000	2001	2002	2003	2004	2005	2006	2007	2008	Average
Clarkboro	69 292	98 654	80 526	88 909	99 892	95 977	107 442	140 307	130 852	**101 317**
Paynton	60 119	55 475	50 577	56 014	57 743	54 100	46 889	51 909	45 457	**53 143**
Riverhurst	100 979	90 056	70 700	66 422	63 193	51 692	42 213	56 320	54 742	**66 257**
Weldon	N/A	49 555	44 007	48 249	54 082	51 835	52 851	50 847	55 133	**50 820**
St.Laurent	N/A	N/A	N/A	41 656	38 612	33 252	33 897	43 409	41 667	**38 749**
Cecil	N/A	24 098	22 112	28 819	24 310	24 015	23 052	18 505	22 986	**23 487**
Wingard	24 417	33 260	21 271	28 299	23 954	21 305	24 725	23 886	26 292	**25 268**
Lemsford	21 548	28 651	18 050	19 129	17 797	15 406	14 708	18 233	17 067	**18 954**
Hague	13 705	22 221	17 040	18 254	19 189	14 580	15 885	16 639	17 435	**17 216**
Fenton	N/A	13 236	10 835	11 909	12 209	12 517	14 341	14 195	15 038	**13 035**
Estuary	19 152	18 045	14 631	14 728	16 435	13 156	14 266	16 968	12 492	**15 541**
Lancer	13 668	6 113	9 992	13 174	13 090	10 694	12 662	13 790	11 918	**11 678**
Total	**322 880**	**439 364**	**359 741**	**435 562**	**440 506**	**398 529**	**402 931**	**465 008**	**451 079**	**412 844**